ROANOKE COUNTY COMMUNITY DEVELOPMENT
COMMERCIAL FIRE ALARM SYSTEM SUBMITTAL CHECKLIST

Project Name:_____ **Date:**_____

Occupancy Address:_____

Owner:_____**Telephone:**_____

Occupant/Tenant:_____ **Telephone:**_____

Owner's Address:_____

Designer: (print)_____ **Signature** _____

Address:_____

Telephone:_____ **Fax:**_____ **Email:**_____

This checklist is to accompany all plan submittals. Three complete sets of drawings, scaled to 1/8" or 1/4" per foot. Design, layout, and installation is to be done in accordance with the current edition of the Uniform Statewide Building Code and all adopted standards.* Information on shop drawings should include all of the following applicable items:

1. __ Floor plans dimensioned showing, in plan view, locations and spacing of all devices, and the locations of all walls and/or partitions. Please indicate what each room or space is to be used for by the occupants
2. __ Point of compass (i.e. direction of north)
3. __ Ceiling construction (flat, cathedral, sloped, peaked, solid joist, etc.) for ceiling mounting devices and typical mounting detail(s) for all applicable devices
4. __ Full height cross section showing typical mounting heights of all devices
5. __ Location of all fire walls and partitions and how the rated assemblies will be maintained when penetrated by equipment and/or wiring, per IBC section 712
6. __ Device to device wiring arrangement, in the plan view, in the structure from fire alarm panel to all devices, inclusive of last device, indicating location of end of line resister where applicable for clarity of system. Indicate the style of wiring used for determining how system will respond to different conditions associated with the functionality. Indicate size of wiring, number of conductors used, and protection methods required by NFPA 70-02 (NEC), per NFPA 72, section 3-4.2.2.1
7. __ All exterior circuits must be provided with surge protection where they enter or exit a building in accordance with NFPA 72, section 1-5.5.3 and NEC Article 700, Sections A, B, C, & D and article 800 30-A
8. __ Location of all fire alarm control panels, annunciator panels, digital communicator or other offsite premises reporting devices

9. __ Indicate how each fire alarm zone is designed in the building to meet provisions of the manufacturer's accepted practices (i.e., number of devices permitted on a zone) and/or as required by the VUSBC (maximum floor area is 22,500 sq.ft. and/or maximum of 300 feet in any direction, and each floor zoned separately) IBC section 907.8
10. __ When applicable, a scaled cross-section of detector mounting locations for door closure operation in accordance with NFPA 72, section 2-10.6
11. __ Verify size of HVAC systems in CFM rating to determine requirement for duct mounted smoke detectors. Detectors must be listed for such purpose and installed in such a way to obtain a representative sample of the airstream in accordance with NFPA 72, section 2-10.5.2
12. __ Source of primary and secondary power. Provide calculations for all secondary power Sources (i.e. battery calculations) and voltage drop calculations as required for the type of equipment to be installed. Identify Circuit Breaker Panel and Branch Circuit that will be dedicated to the Fire Alarm System (1-5.2.5.2)
13. __ Method of communications with monitoring agencies and number of telephone lines for the transmission (5-5.3.2.1.7.1, 5-5.3.2.1.9)
14. __ Name, address, and telephone number of company monitoring the fire alarm system. Please indicate if the company is a UL Listed Central Station or Remote Station. The installation of a Central Station Fire Alarm requires it to be placarded and certified, per section 1-6.2.3.2.2; provide on the plans, if applicable, the location and design criteria of placard
15. __ Manufacturer's data sheets on all equipment used in the system. Where manufacturer's data sheets over multiple devices, indicate those devices used in the system. Specifically provide information for the Digital Alarm Communicator Transmitter (DACT) programming options
16. __ Provide a signal schedule to include the following for both INTELLIGENT and NON-INTELLIGENT SIGNALING SYSTEMS:

POINT or ZONE (A)	TYPE OF SIGNAL (B)	ALPHA NUMERIC NOMENCLATURE or ZONE DESC. (C)	LOCAL FUNCTION (D)	OFF SITE SIGNAL (E)

POINT – Designation by designer of numeric point

ZONE – Floor level or area of zone

TYPE OF SIGNAL – Alarm, Supervisory, or Trouble signal

ALPHA NUMERIC NOMENCLATURE – Type of initiating device (manual pull, sprinkler water flow, HVAC smoke detector, OS&Y tamper switch, PIV tamper switch, etc.)

ZONE DESCRIPTION – Floor level or area of zone

LOCAL FUNCTION – Fire alarm system (AV activation, door closure, HVAC shutdown, suppression system activation)

OFF SITE SIGNAL – Generic/specific signal correlating with each point as transmitted to the alarm monitoring company.

Note: *Are multiple common signal types grouped to transmit a generic signal to monitoring source?*
Does each point/zone transmit distinctively to monitoring service?

Information on riser diagram should include all of the following applicable items in accordance with NFPA 72, section 1-6.1.1 and A-7-2.2:

1. __ Provide a single line riser diagram for devices on the fire alarm system for all the applicable items below:
    a. __ Initiating devices (water flow, pull stations, smoke/heat detectors, etc.)
    b. __ Indicating devices (horns, visuals, etc.)
    c. __ Supervisory devices (tamper and pressure switches, etc.)
    d. __ FACP(s) and annunciator panel(s)
    e. __ Elevator capture
    f. __ Special locking devices
    g.__ HVAC controls

Fire protection system design is considered engineering work and must be done under the supervision of the design professional of record, where applicable with State Law. Fire alarm shop drawings must first be submitted to the design professional, where applicable and stamped "approved" prior to submittal to our office. For more information please see the SFPE Position Statement; *The Role of the Engineer and the Technician Designing Fire Protection Systems* at
http://www.sfpe.org/upload/sfpe_position_statement_october_2005_001.pdf

*Currently adopted edition of applicable standards for general design/installation:

- *International Building Code 2003*
- *International Fire Code 2003*
- NFPA 72-1999 National Fire Alarm Code